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India

Sugar Annual

2019

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Report Highlights:
India's centrifugal sugar production in marketing year (MY) 2019/20 (Oct-Sept) is expected to decline 8.4 percent to 30.3 million metric tons (MMT) due to lower than expected sugarcane production and net reduction in national sugar recovery rate, which was at a record high this season (MY 2018/19). Despite the trend, for the third time in the last four years Uttar Pradesh will again be the largest producer of sugar in India; this will partially compensate for lower output from Maharashtra and Karnataka. Overall, sugarcane production will be down eight percent to 355 MMT from 4.7 million hectares (MH). Assuming normal market conditions, India should be able to export upwards of 3.5 MMT of sugar but with some incentives after adjusting for a modest rise in sugar consumption to 28.5 MT. That will still leave stocks of a record 17 MMT, which is roughly 7 months of consumption.

Note: All sugar data in the report are raw value basis unless otherwise mentioned.

Commodities:
Sugar, Centrifugal
Sugar Cane for Centrifugal

Production:

Centrifugal Sugar production in MY 2019/20 will Decline for Second Successive Year to 30.3 MMT

The MY2019/20 (out-year) centrifugal sugar (henceforth sugar) production is forecast to decline 8.4 percent to 30.3 MMT, its second consecutive year of decline. This forecast includes 600,000 metric tons (MT) of *khandsari* (a local type of low-recovery sugar prepared by open-pan evaporation) and 29.7 MMT of mill sugar (equivalent to 27.8 MMT of crystal white sugar, Table 4). Lower than expected cane production in the out-year coupled with a net reduction in the national-average sugar recovery rate[1] will reduce cane availability for direct crush-to-sugar and proportionately moderate sugar output as well. In addition, successive benefits from the dedicated supply of cane juice/B-heavy molasses for fuel ethanol production will further incentivize mills to divert excess sugar to produce fuel ethanol and thus improve cash flows. Note: however, this change[2] is not reflected in sugar output for the out-year. (*Note: figures appearing in context are rounded to nearest decimal point*).

Although the national sugar recovery rate estimated for the out-year will be lower than the current year's record-high estimate, it will still be above the recent five-year average. A significant rise in the planted area of high-yielding, high-recovery and early-maturing cane variety (Co-0238), particularly from northern India, may partially make-up for a 'lower than expected' sugar recovery from Karnataka and Maharashtra (see sugarcane production section below). The above assumes good agricultural management practices, normal precipitation, and favorable climatic conditions through the harvest period (in North India).

As indicated above, the growing share of Co-0238, particularly in northern Indian[3] states such as Bihar, UP, Punjab, Haryana and Uttarakhand, should help mills produce additional sugar in an otherwise limited cane supply situation (in the out-year). The cane variety described above has been in commercial cultivation for 5 to 6 years and nearly occupies two-thirds of total cane planted in this region.

For the third time in the last four years, Uttar Pradesh (UP) will again be the largest producer of sugar in India; it will partially compensate for lower than estimated sugar production from Maharashtra and Karnataka. Maharashtra will trail marginally behind UP, and sugar production in Karnataka will recover to near normal levels, based on the five-year average. Combined, these states will contribute

[1] From an average 11.64 percent to 11.52 (estimated).
[2] This change is not reflected in sugar production forecast for out-year (MY 2019/20) due to lack of concrete data on quantity likely to be contracted for supply of fuel ethanol from B-heavy molasses or sugarcane juice. Current plans would displace upwards of 650,000 MT of sugar. This estimate is subject to post updates.
[3] The advantage with an early-maturity variety is that the sucrose accumulation reaches 15% to 16% levels by November in the ratoon cane and by mid-January for the plant crop. Early-maturing cane varieties enable mills to get higher sugar recovery from November and through the end of the crushing season in late April (Source: Author, Business Line).

almost 80 percent of total sugar production in the out-year. Cane supplies to *gur* (jaggery, or crude, non-centrifugal, lump sugar) manufacturing units will return to near–normal levels, with out-year *gur* production reaching 5.2 MMT, 4.4 percent below the current year estimate.

Compared to previous Post assessment, India's sugar production in MY 2018/19 is revised down by eight percent to 33 MMT to reflect the latest industry estimates. The current year's sugar production is adjusted for expected lower output from Uttar Pradesh and slightly higher production from Karnataka. Sugar production from Maharashtra, which was in line with the previous forecast, is in fact highest among all producing states (in MY 2018/19), which is a notable spurt in production, particularly after trailing Uttar Pradesh for two years. In addition, a sugar recovery rate of 11.64 percent in the current sugar year (MY 2018/19) is a historic high, despite cane yields that were four percent below the previous assessment.

Additionally, industry sources indicate that some 450-500 million liters of ethanol will be produced from B-Heavy molasses in MY 2018/19, thereby reducing more than an estimated 600,000 MT of sugar from total supply. Surging crude oil prices, coupled with an attractive regulated purchase price for ethanol supplied to the Oil Marketing Companies (OMCs) for blending with gasoline, will definitely spur sales, increase mills revenue, and help improve cash flows.

Sugarcane Production in MY 2019/20 Will Decline Eight Percent to 355 MMT on 4.7 MH

Sugarcane production is likely to decline eight percent to 355 MMT due to a net decline in total cane planting, which is down nine percent to 4.7 (4.65 precisely) MH. Average cane yield will be close to last year's level (77 MT/Ha) assuming favorable growing conditions, near-normal 2019 monsoon season (June-September), and a larger share of the ratoon crop. No new canes were planted in regions suffering acute water scarcity[4] due to poor and untimely rainfall in the *kharif* and *rabi* season 2018/19. As a result, the major growing regions of Karnataka and Maharashtra experienced water rationing. Industry sources indicate that there is not enough water to irrigate canes planted last year and this has induced water distress on farms. Only a few farmers who have access to bore wells can meet partial water requirements.

On April 15, 2019, the Indian Meteorological Department (IMD), government of India (GOI), predicted a near-normal monsoon (June-September) for 2019, with lowered chance of an above-normal monsoon. Quantitatively, it is projected at 96 percent of the Long Period Average of 89 cm. Additionally, a weak **El Niño** condition is likely to exist, but will recede in intensity in the later part of the monsoon (IMD Press Release). Generally, a normally distributed rainfall helps fill reservoirs and replenish aquifers and ground water levels.

Meanwhile, the second advance estimate from the Ministry the Agriculture (MinAg), GOI, calculates sugarcane production in MY 2018/19 at 380.8 MMT from 5.1 MH (average yield estimated at 75.2 MT/Ha). Post estimates current year cane production to be slightly higher at 385 MMT from 5.1 MH. This is nine percent lower than Post's previous estimate due to lower than anticipated cane yields. Sugarcane output for the current year was revised down to indicate lower than anticipated cane production in Uttar Pradesh (MY 2018/19). Late monsoon rains (September 2018) likely affected both

[4] Please note: a prolonged and severe drought like condition could lead to lower than expected cane yield and consequently bring down the national (average) recovery, even below the forecast levels.

cane yield and sugar recovery in Uttar Pradesh. Finally, the GOIs 'final' cane production figure for MY 2017/18 is 377 MMT from 4.7 MH, both of which Post has adopted as 'final' figures.

Cane Arrears Likely to Decline in MY 2018/19

A surplus sugar season, rising cost of production, lower international prices, and rising inventory have all affected profits and cash flow. This in turn has made it difficult for sugar mills to make timely payments to suppliers and thus accrued arrears in payments to cane growers. As of February 22, 2019, the total balance of arrear payments to cane suppliers for MY 2018/19 was $2.8 billion. To address this concern, the Cabinet Committee on Economic Affairs (CCEA), government of India (GOI) on March 1, 2019 approved a proposal to provide soft-loans totaling up to $1.5 billion. These loans to the sugar industry carry favorable rates of interest at 7 to 10 percent and range from $75 to $150 million for one year. The loans include the facility of having banks make arrears payments directly to farmers on behalf of sugar mills.

Cane arrears are usually higher for states where cane costs are not directly linked to the Revenue Sharing Formula (RSF)[5]. With this formula, farmers are paid the Fair and Remunerative Price (FRP) as a first installment. If amount due to a farmer under the RSF is more than the FRP, then the farmer will be entitled to a second payment. The FRP for the ongoing season is INR 275, compared to INR 255 in the previous year. (Note: fewer cane payments in arrears in the preceding season usually results in increased availability of cane for supply to mills.)

According to media reports, the state government of Tamil Nadu is considering a change from using the State Advised Price (SAP) to using RSF; they believe this would ensure better remuneration for their farmers and enable the local industry to reduce their debts. Accordingly, the Tamil Nadu Sugarcane Act (Regulation of Purchase Price) came into force on October 1, 2018. This is intended to facilitate implementation of the new scheme, although the rules and means of implementation are not yet defined.

Other Additional Assistance by GOI

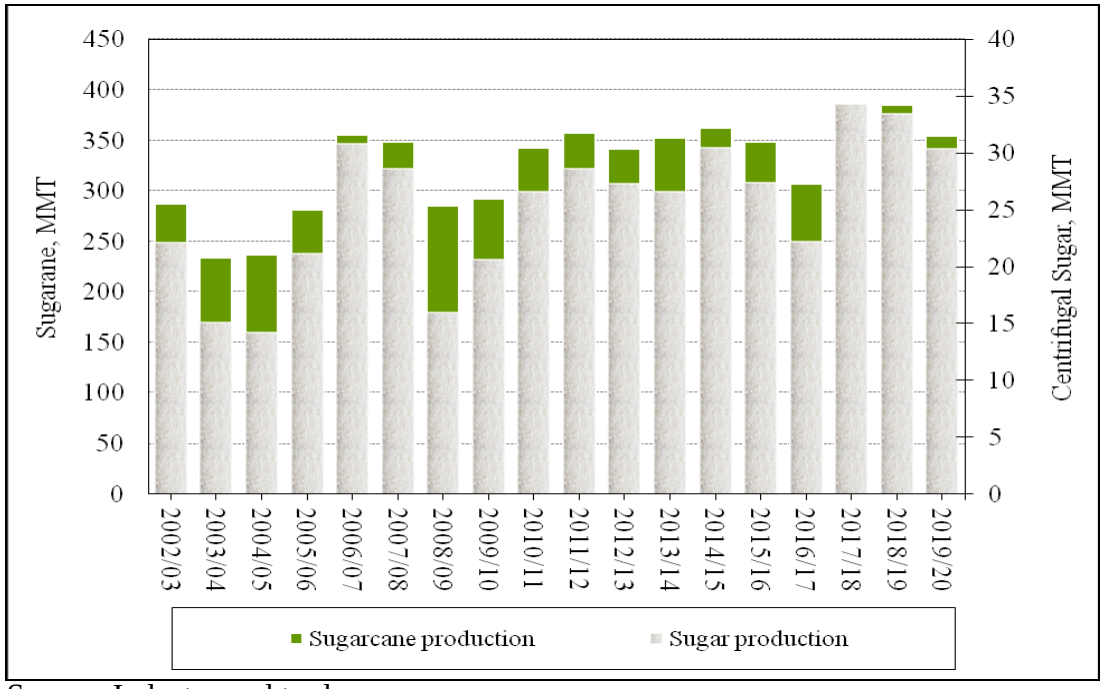
1). Improve mills sales realization by increasing minimum selling price of white sugar from INR 29/kg to INR 31/kg with effect from February 14, 2019. The greater revenue realized from sales at the enhanced minimum selling price will improve mills cash flow and help them pay off arrears to cane farmers. According to the current scheme, the Sugar Price Control Order 2018, sugar mills cannot sell their sugar at a price, which is below MSP, or else severe penalties are imposed under the provisions of the Essential Commodities Act, 1955. (Note: the MSP of sugar is based on the Fair & Remunerative Price (FRP) of sugarcane plus the minimum cash conversion cost of the most efficient mills.)

[5] The revenue sharing model noted above was recommended in 2012 by a GOI-appointed expert committee under C. Rangarajan, Chairman of the Prime Minister's Economic Advisory Committee. The committee recommended that states enact one of two policies for implementing a revenue sharing program: 1) cane prices are set at 75 percent of the value of the sugar produced from one quintal of cane; or 2) sugar prices are set at 70 percent of the sales revenue for sugar, molasses, bagasse, and press-mud produced from a quintal of cane.

2). Price support to sugar mills at INR 13.9/ quintal of cane crushed in MY 2018-19 (compared to INR 5.5 per quintal (qtl) in MY 2017/18). Participation requires compliance with conditions stipulated by Department of Food & Public Distribution, government of India (GOI). For this support, the total expenditure from central government funds would be about $566 million.

3). The Central Government has been issuing stock holding orders for every month since June, 2018, which indicates the quantity of white/ refined sugar prescribed for domestic sale/dispatch by millers for that particular month. In the monthly stock holding limit order for the month of March 2019, issued on February 28, 2019, 2.5 MMT of white/refined sugar has been assigned for domestic sale/dispatch.

Figure1. India: Sugarcane and Centrifugal Sugar Production



Source: Industry and trade sources

Consumption

Out-year sugar consumption is forecast at 28.5 MMT, 3.6 percent above the current year estimate of 27.5 MMT. India's stable and growing economy, rising income levels, and changing food habits and consumption patterns will boost food consumption, including sugar. Bulk users usually account for two-thirds of total sugar consumption in India.

Meanwhile, consumers are being encouraged to make healthier food choices and media reports indicate that the Food Safety and Standards Authority of India (FSSAI) of India will soon propose a draft labeling regulation. This regulation will require product labels to display red color-coding on the front of packaged food products that have high-fat, high-sugar[6], or high-sodium levels.

[6] In any 100 gm or 100 ml sample, if ten percent of the total energy comes from sugar, that warrants a '**red**' label as high-in-sugar.

Also, most *khandsari* sugar is consumed by local sweet shops, but *gur* is mostly consumed in rural households due to its easy availability and affordability (as compared to white sugar). It is regarded as a good source of energy and rural families use it in feeds as well as foods.

Market Prices

In April 2018, wholesale sugar prices bottomed out then rallied 17 percent to INR 34,500/MT by September 2018, where they have remained stable through April 2019. Year on year, sugar prices have firmed up, at least partly in response to recent price stabilization measures implemented by the GOI. Similarly, *gur* prices have risen 14 percent in the last three months, reversing a steep 20 percent fall exactly four months before the uptick. Generally, *gur* prices move in tandem with sugar prices either at a premium or at a discount in response to domestic and international price movements. At current price levels, *gur* is selling at a discount of $11 per MT to sugar (quoted at $483 per MT) (Figure 2).

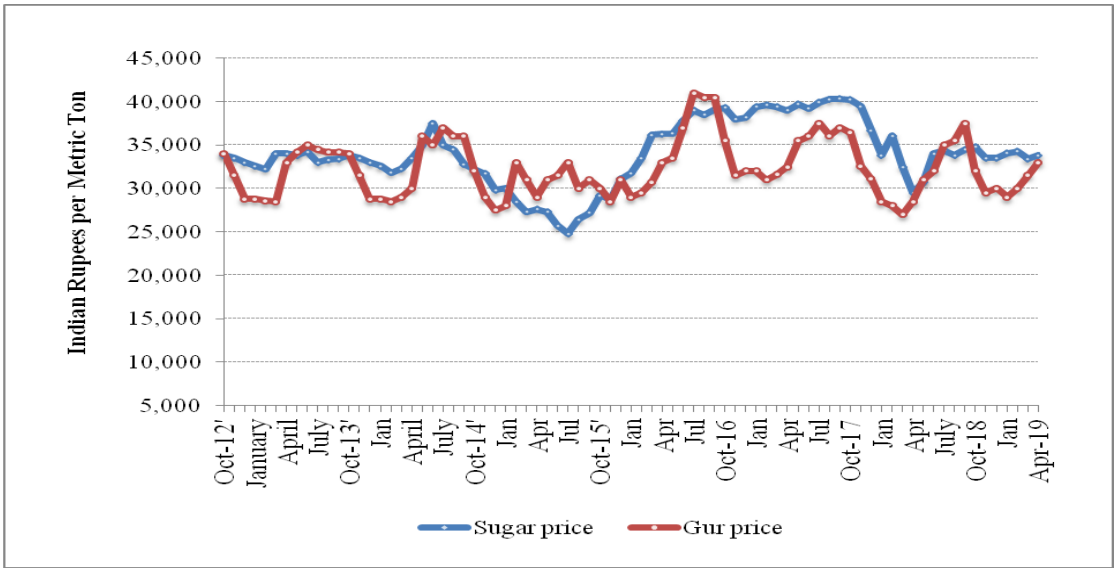
Currently, sugar sold in international markets is selling at more than 33 percent discount to Indian sugar (wholesale), a gap which widened by 9 percent in the last seven months, driven in part by Indian rupee appreciation of 6 percent (relative to USD). Subsidies and supports have not made Indian sugar competitive on international markets.

Trade

Assuming normal market conditions, India should be able to export 3.5 MMT of surplus sugar in MY 2019/20, but with some incentives. Total exports will include 1 MMT of sugar re-exported under the Advance Authorization scheme (AAS) scheme; the remaining 2.5 MMT will be commercial sales. Note: *Export sales will be adjusted in subsequent updates to reflect actual market conditions*. Imports are likely to be negligible[7] since supply will exceed requirements for both consumption and stocks.

Figure 2. India: Sugar and Gur Prices in Delhi Market

[7] An exception involves the Duty Free Import Authorization (DFIA) scheme. Under this scheme, exporters are allowed to import sugar duty free after meeting an export obligation. By contrast, the Advance Authorization scheme (AAS) allows local sugar millers or exporters to import raw sugar duty-free against a **future** export commitment.



Source: Industry and trade sources

Sugar exports in the current year (MY 2018/19) will be close to 3.4 MMT, of which an estimated 1.2 MMT will be sugar re-exported under the AAS; the remaining 2.2 MMT will be commercial sales under the mandatory Minimum Indicative Export Quota (MIEQ 2018-19). Concurrently, sugar import estimates are upwards of 1.2 MMT, most of which will be under the import authorization scheme. Recent trade data indicates India imports the most sugar from Brazil, and smaller quantities from UAE, Germany, USA, Japan, France and Switzerland. As for white/refined sugar exports, Sudan, Somalia, Djibouti, Cote d Ivoire, Sri Lanka, UAE, Yemen, Afghanistan, South Africa, Pakistan and most of the other African countries are important buyers of Indian sugar. Note: all sugar exports under MIEQ are over and above the exports made under the AAS, or Duty Free Import Authorization (DFIA).

Last year, India exported 620,000 MT under MIEQ; 1.6 MMT was sugar re-exported under AAS. Imports stood at 2 MMT, mostly for resale under AAS.

Trade Policy

Anticipating surplus sugar production yet again this year, the GOI introduced policy initiatives to facilitate sugar exports and subsidize any related additional production costs. On September 28, 2018, the GOI implemented its Minimum Indicative Export Quota (MIEQ) of 5 MMT for all grades of sugar, including raw, plantation white, and refined, for sale in MY 2018/19. Sugar mills are required to export their MIEQ allocation of sugar by September 30, 2019. The CCEA has approved a sum of $768 million to offset cane production costs as a boost to export sales.

In doing so, the GOI covered expenditures towards internal transport, freight, handling and other charges at these rates: INR 1000/MT for sugar mills located within 100 kilometres (kms) from ports; INR 2500/MT for mills located beyond 100 kms from a coastal port; and the lower of INR 3000/MT or actual expenditure for mills located in non-coastal states. Total government expenditure on such subsidies would be about $191 million (based on the exchange rate on September 1, 2018).

An import duty of 100 percent on white and raw sugar has been in effect since February 6, 2018; no duty has applied to exports since March 20, 2018.

Stocks

Ending stocks in the out-year are forecast to drop four percent to 16.8 MMT. The forecast sugar stock is roughly 7 months' consumption requirement (while the minimum stock requirements is 3 months' consumption). Ending stocks for the current sugar season (MY 2018/19) are estimated at 17.6 MMT, which is a record (Stock/Use ratio of 64 percent).

Additionally, the end stocks for previous, current and forecast years include a 3 MMT buffer that was created last year to help stabilize sugar prices and is carried forward as excess supply (above export sales, normal stocks, and consumption requirements). The scheme for creation and maintenance of this buffer stock by the sugar mills was amended per notification dated December 31, 2019 to give further stimulus to sugar exports. The notification stated that GOI will not reimburse the carrying cost of buffer stocks if mills do not export the target quantity set for them in MY 2018/19. The scheme was effective for one year starting July 1, 2018 and was notified on June 15, 2018. GOI proposed to reimburse a sum of $171 million[8] towards interest, insurance, and storage charges.

Policy

Sugarcane Production and Pricing Policy

To raise yields and recovery rates for sugarcane growers, the GOI supports research, development, training of farmers, transfer of new varieties, and improved production technologies, including seeds, implements, and pest management methods. The Indian Council of Agricultural Research conducts sugarcane research and development at the national level. State agricultural universities, regional research institutions, and state agricultural extension agencies support these efforts at the regional and state levels. Central and state governments also support sugarcane growers by ensuring finances and input supplies at affordable prices.

Sugar Development Fund (SDF)

The SDF was established in 1982, through an act of Parliament. The SDF finances loans to the sugar mills to facilitate the rehabilitation and modernization of existing production equipment and methods. Included are bagasse-based co-generation power projects, production of anhydrous alcohol or ethanol from alcohol, and conversion of existing ethanol plants into zero liquid discharge (ZLD) plants. The loans are provided at a concessional rate of 2 percent below the prevailing bank rate.

SDF is also being used to subsidize things such as: buffer stocks of sugar; internal transport and freight charges to the sugar factories for export shipments; concessional terms on loans to sugar factories in support of any scheme approved by the Central government; marketing and promotion service for raw

[8] The subsidy shall be credited to a no-lien bank account opened by the sugar mill. From this no-lien account, banks shall directly remit the funds into the accounts of farmers on behalf of sugar mills against cane price arrears. Subsequent balances, if any, would be credited to the mills' accounts (Source: DFPD, GOI)

production; and concessional loans to sugar mills to expedite payments to farmers for cane. (Source: Directorate of Sugar, Ministry of Consumer Affairs, Food and Public Distribution, GOI)

The fair and remunerative price (FRP) system

The GOI establishes a minimum support price (MSP) for sugarcane based on recommendations from the Commission for Agricultural Costs and Prices (CACP), consultations with state governments, and consultations with sugar industry and cane growers' associations. In MY 2009/10, the GOI announced a new Fair and Remunerative Price (FRP) system that links cane prices with miller's incomes[9]. Several state governments augment the FRP, typically by 20-35 percent, due to political populism rather than market pricing. Sugar mills are required to pay the "state advised price" (SAP) to sugarcane farmers irrespective of market prices. A forecast of a smaller cane crop normally forces millers to pay higher cane prices, thus inflating sugar prices, which exceed the MSP/FRP in most of the growing states.

On July 18, 2018, the CCEA approved the FRP of sugarcane for MY2018-19 at INR 275 per quintal for a basic recovery rate of 10 percent. A premium of INR 2.75/quintal (qtl) is paid for each 0.1% increase of recovery over and above 10 percent. Similarly, the FRP is reduced by INR 2.75/qtl for every 0.1 percent decrease in recovery below 10%, but above 9.5 percent (Table 7). For sugar mills having recovery of 9.5% or less, the CCEA has approved payment of INR 261.25/qtl.

Marketing

Sugar Marketing Policy

According to industry sources, the sugar industry remains under production controls by state governments, including sugar industry licensing, cane area reservation, minimum distance criteria, adoption of the cane price formula, specified cane procurement areas for sugar mills, and cane pricing.

Meanwhile, sugar procurement for the public distribution system (PDS) is done on the open market by governments of respective states and Union Territory's at a central government subsidy of INR 18.5 per kg for Antyodaya Anna Yojana (AAY, scheme for feeding the poorest of poor), a program to provide food to the poorest families. Families are limited to one kg of sugar per family per month. The States/UTs may continue to subsidize expenditures on transportation, handling, and dealers' commission etc. over and above the retail issue price of INR 13.5/- per kg to the beneficiary.

Ethanol Program

The ethanol blending program (EBP) promotes blending of ethanol with gasoline to reduce pollution, encourage value addition along the value chain, and improve millers' cash flows to enable payment of arrears to cane growers. On March 7, 2019 the CCEA allocated $400 million to subsidize interest payments on $1.8 billion of bank loans to the sugar mills. This scheme is in addition to $197 million

[9] With the amendment of the Sugarcane (Control) Order, 1966 on 22.10.2009 and the concept of Statutory Minimum Price of sugarcane was replaced with the 'Fair and Remunerative Price (FRP) of sugarcane for 2009-10 and subsequent sugar seasons. The cane price announced by the GOI is adopted from the recommendations of the Commission for Agricultural Costs and Prices after consulting the State Governments and associations of sugar industry (Source: Department of Food and Public distribution, GOI).

already approved by CCEA in June, 2018. An additional $81 million of interest subsidies was provided for total loans of $373 million crore issued by banks to molasses-based standalone distilleries. Total proposed loans of $2.2 billion should help build more ethanol production capacity, which will enable the processing of excess sugar into ethanol (Source: PIB Press Release March 2019 and DFPD Notification on Augmenting Ethanol Supply).

Similarly, in addition to conventional EBP envisaged above, an alternate route such as second-generation (2-G) ethanol produced from biomass and other wastes is being explored by the Ministry of Petroleum and Natural Gas (MoP&NG), GOI to bridge the supply gap for the EBP program. In this direction, on February 28, 2019, "Pradhan Mantri (Prime Minister) JI-VAN Yojana (program)" was launched as a tool to create 2-G Ethanol capacity by attracting investments in this new sector. The JI-VAN Yojana (program) will be supported with total financial outlay of $277 million for the period from Indian Fiscal Year 2018-19 (April-March) to 2023-24. The Centre for High Technology (CHT), a technical body under the aegis of MoP&NG, will be the implementation Agency for the scheme (PIB Press Release, Feb 2019). The MoP&NG has a target of 10 percent blending percentage of Ethanol in petrol by 2022.

For the first time ever, in August 2018 the GOI announced that different prices applied to ethanol produced from 'B' heavy molasses and that produced from sugarcane juice, with a premium for the latter. The latter of course involves diverting B-heavy molasses and cane juice from sugar production into ethanol production. Use of damaged food grains for ethanol production also drew a premium. Subsequently, contracts have been signed to supply 2.4 billion liters of ethanol for the period 2018-19 (Dec 2018 – November 2019). This is encouraging, but still short of the mark: the requirement for 10 percent ethanol blending countrywide is 3.3 billion liters of ethanol.

Contracted production of 2.4 billion liters of ethanol will enable an overall petrol blend rate of about 6 percent. Besides the benefit to the environment of the cleaner burning fuel, other incentives also minimize the environmental impact of producing this fuel: of the 2.4 billion liters of ethanol produced, 450 to 500 million liters will be produced from 'B' heavy molasses and sugarcane juice, which constitutes a savings of more than half a million tons of sugar production. Similarly, using damaged food grains to produce ethanol will save an additional 100,000 plus tons of sugar (Source: ISMA).

Production, Supply and Demand Data Statistics:

Table 1. India: Centrifugal Sugar (Raw Value Basis), in Thousand Tons						
Sugar, Centrifugal	**2017/2018**		**2018/2019**		**2019/2020**	
Market Begin Year	**Oct 2017**		**Oct 2018**		**Oct 2019**	
India	**USDA Official**	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Beginning Stocks	6570	6570	13729	14214	0	17584
Beet Sugar Production	0	0	0	0	0	0
Cane Sugar Production	34110	34309	35870	33070	0	30305
Total Sugar	34110	34309	35870	33070	0	30305

Production						
Raw Imports	1333	2054	0	1200	0	1000
Refined Imp.(Raw Val)	16	17	0	0	0	0
Total Imports	1349	2071	0	1200	0	1000
Total Supply	42029	42950	49599	48484	0	48889
Raw Exports	200	46	2000	50	0	100
Refined Exp.(Raw Val)	1600	2190	2000	3350	0	3400
Total Exports	1800	2236	4000	3400	0	3500
Human Dom. Consumption	26500	26500	27500	27500	0	28500
Other Disappearance	0	0	0	0	0	0
Total Use	26500	26500	27500	27500	0	28500
Ending Stocks*	13729	14214	18099	17584	0	16889
Total Distribution	42029	42950	49599	48484	0	48889

Note: Stocks include only milled sugar, as all *khandsari* sugar produced is consumed within the marketing year. Virtually no centrifugal sugar is utilized for alcohol, feed, or other non-human consumption. Includes 3MMT of buffer carried forward since July 2018. End stock for 2018/19 may reduce by an estimated 675,000 MT, to produce upwards of 450 to 500 million liters of fuel ethanol from B-heavy molasses.

Table 2. India: Sugarcane, Centrifugal, Area in Thousand Hectares and others in Thousand Tons

Sugar Cane for Centrifugal	2017/2018		2018/2019		2019/2020	
Market Begin Year	Oct 2017		Oct 2018		Oct 2019	
India	USDA Official	New Post	USDA Official	USDA Official	New Post	USDA Official
Area Planted	4980	4730	5200	5060	0	4650
Area Harvested	4950	4730	5200	5060	0	4650
Production	413000	377000	423000	385000	0	355000
Total Supply	413000	377000	423000	385000	0	355000
Utilization for Sugar	290000	294000	293000	275000	0	253000
Utilization for Alcohol	123000	83000	130000	110000	0	102000
Total Utilization	413000	377000	423000	385000	0	355000

Note**:** Virtually no cane is utilized directly for alcohol production. 'Utilization for alcohol' in the PS&D includes cane used for *gur*, seed, feed and waste. 'Utilization for sugar' data include cane used to produce mill sugar and *khandsari* sugar

Table 3. India: Sugarcane Area, Production, and Utilization

Sugar Cane	Area[1]	Yield[1]	Product[1]	Sugar[1]	Khandsari[2]	Gur[2]	Seed[2]
	Mha	MT/ha	MMT	MMT	MMT	MMT	MMT
1990/91	3.69	65.39	241.05	122.32	13.18	76.63	28.93
1995/96	4.15	68.02	282.09	174.76	10.00	67.27	30.06
2000/01	4.32	69.35	299.32	176.65	11.00	75.75	35.92
2001/02	4.41	67.09	295.95	180.32	10.50	69.62	35.51
2002/03	4.52	63.58	287.38	194.33	9.50	49.07	34.49

2003/04	3.94	59.39	233.86	132.51	10.00	63.29	28.06
2004/05	3.66	64.74	237.08	124.77	9.50	74.36	28.45
2005/06	4.20	66.93	281.17	188.67	8.50	50.26	33.74
2006/07	5.15	69.03	355.52	222.00	10.00	80.86	42.66
2007/08	5.06	68.81	348.18	249.91	7.00	49.49	41.78
2008/09	4.44	64.19	285.02	145.00	6.50	99.32	34.20
2009/10	4.18	70.01	292.30	185.55	6.50	65.17	35.08
2010/11	4.89	70.09	342.38	240.00	7.50	53.79	41.09
2011/12	5.08	71.07	361.03	257.00	7.00	53.70	43.32
2012/13	5.06	67.38	341.20	251.50	7.00	41.75	40.94
2013/14	5.01	70.26	352.14	234.32	8.00	67.56	42.25
2014/15	5.14	70.44	362.33	265.40	8.00	45.45	43.48
2015/16	4.96	70.25	348.45	238.00	8.50	60.13	41.81
2016/17	4.38	70.02	306.70	193.30	8.50	68.09	36.80
2017/18	4.73	79.70	377.00	294.00	8.00	29.76	45.24
2018/19	5.06	76.09	385.00	278.00	9.00	54.80	46.20
2019/20	4.65	76.34	355.00	253.00	9.00	50.40	42.60

Note: Figures for 2018/19 and 2019/20 are FAS estimates.

Source: [1] Directorate of Economic and Statistics, Ministry of Agriculture
[2] FAS/New Delhi Estimate.

Table 4. India: Mill Sugar Production by State, in thousand metric tons, crystal weight basis

⇩State / MY→	2017/18	2018/2019	2019/20
	Revised	Estimate	Forecast
Andhra Pradesh	7.5	7.5	7.7
Bihar	6.4	6.7	5.8
Gujarat	11.1	11.7	12.0
Haryana	4.4	4.5	4.6
Karnataka	36.5	44.2	35.0
Maharashtra	107.2	106.5	80.0
Punjab	6.7	5.6	5.6
Tamil Nadu	6.3	6.0	6.0
Uttar Pradesh	120.7	102.3	110.0
Others	9.2	11.9	11.3
Total	316.00	307.00	278.00

Sources: MYs 2017/18 is industry and government estimate; MYs 2018/19 and 2019/20 – FAS/New Delhi Estimate.
Note: Excludes *khandsari* sugar, as state-wise breakout is not available.

Table 5. India: Commodity, Centrifugal Sugar, Price Table
(Prices in INR per MT)

Year	2017	2018	2019	Percent Change
January	39,400	33,800	34,100	1
February	39,700	36,100	34,300	5
March	38,400	32,500	33,400	3
April	39,000	29,500	33,800	15
May	39,700	30,700		
June	39,200	34,000		

July	39,910	34,400		
August	40,300	33,800		
September	40,360	34,500		
October	40,260	34,800		
November	39,450	33,500		
December	36,700	33,500		
Exchange Rates:	65.12	67.12	70.16	
	Local Currency INR/US $			

Note: Exchange rates for 2017, 2018 and 2019 refer to respective Marketing Years (October–September).
Source & Contract Terms: Indian Sugar Mills Association, NFCSF and Department of Consumer Affairs (GOI); month-end prices in the Delhi wholesale market.

Table 6. India: Commodity, Gur, Price Table
(Prices in INR per MT, actual weight basis)

Year	2017	2018	2019	Percent Change
January	32,000	28500	29000	1.75
February	31,000	28000	30000	7.14
March	32,000	27000	31500	16.67
April	32,500	28500	33000	15.79
May	35,500	31000		
June	36,000	32000		
July	37,500	35000		
August	36,080	35500		
September	36,980	37500		
October	36,430	32,000		
November	32,580	29,500		
December	31,120	30,000		
Exchange Rate:	65.12	67.12	70.16	
	Local Currency INR/US $			

Note: Note: Exchange rates for 2017, 2018 and 2019 refer to respective Marketing Years (October–September).
Source & Contract Terms: Indian Sugar Mills Association, NFCSF and Department of Consumer Affairs (GOI); month-end prices in the Delhi wholesale market.

Table 7. India: Comparative Commodity Support Price Table, INR per MT, MSP or FRP

Marketing Year	2015/16	2016/17	2017/18	2018/19
Wheat	15,250	16,250	17,350	18,400
Rice (Grade A)	14,500	15,100	15,900	17,700
Sugarcane	2,300	2,300	2,550	2,750
State Advised Price (SAP) for Sugarcane, by State				
Uttar Pradesh	2,700-2900	3,000-3,150	3150-3250	3150-3250
Haryana/Punjab	2,950-	3,100-	2850-	3200-3400

	3,500	3,200	3300	
Southern States[1]	2,650-2,850	2,300-3,050	-	-

[1]: Sugar mills pay market price.
Source: Indian Sugar Mills Association
Note: Latest media report indicate that the Commission for Agricultural Costs and Prices, GOI has recommended an FRP for sugar season 2018/19 at INR 275 per quintal at 9.5 percent recovery level subject to a premium of Rs 2.68 per quintal for every 0.1 per cent point increase in recovery rate.

Table 8. India: Import Trade Matrix, Centrifugal Sugar, MY 2017/18, In MT

Period	Raw Sugar ^	White Sugar	Total
October	364,543	724	3,65,267
November	267,501	2,195	269,696
December	151,920	1,482	153,402
January	321,130	1,785	322,915
February	30,000	3,221	33,221
March	59,110	3,961	63,071
April	0	1,494	1,494
May	138,810	193	139,003
June	118,907	426	119,333
July	138,776	138	138,914
August	227,063	131	227,194
September	236,073	279	236,352
Total	2,053,833	16,029	2,069,862

Source: Industry and trade source.
^: Estimated. Month wise break-up data unavailable

Table 9. India: Export Trade Matrix, Centrifugal Sugar, MY 2017/18, In MT

Period	Raw Sugar	White Sugar	Total
October	667	178,358	179,025
November	7,472	86,465	93,937

December	2,872	164,406	167,278
January	22,117	79,260	101,377
February	1,201	1,45,455	146,656
March	1,350	69,800	71,150
April	1,573	150,965	152,538
May	8,991	185,778	194,769
June	0	316,932	316,932
July	0	266,083	266,083
August	0	225,155	225,155
September	0	179,659	179,659
Total	46,243	2,048,316	2,126,426

Source: Industry and Trade sources.

Month wise break-up data unavailable